cervical spondylotic canal stenosis admitted to the university hospital of Nantes during the period 2000–2010.

Results.– The studied population consisted of 50 men (79.37%) and 13 women (20.63%) with a mean age 61.1 years (range 30.5 to 88.2). The SCI was due to a fall in 77.78% of cases and traffic accidents in 22.22% of cases. The initial ASIA Impairment Scales were AIS A in 4 cases (6.35%), AIS B in 6 cases (9.52%), AIS C in 22 cases (34.92%) and AIS D in 30 cases (47.62%). The initial motor level was C3 in 4 cases C3 (6.35%), C4 in 18 cases (28.57%), C5 in 22 cases (34.92%), C6 in 6 cases (9.52%), C7 in 6 cases (9.52%) and C8 in 1 case (1.59%). 66.66% of the patients underwent surgery in a mean delay of 50 days (range D1-D213). Three patients died at the acute phase. At discharge, the analysis of the ability to walk showed that 52.38% were able to walk without devices, braces or physical assistance; 25.40% walked with cans or crutches, 12.70% used a manual wheelchair and 30.63% an electric wheelchair. Concerning the mode of voiding: 71.43% recovered a spontaneous micturation, 7.94% had an indwelling catheter or suprapubic cathete, 4 performed self intermittent catherization, 2 were on intermittent catherization by a care giver. Four patients underwent urological surgery: one sphincterotomy, one continent cystostomy, two non-continent urinary diversion (Bricker). 58.73% returned to home without caregiver, 15.87% with care giver, 14.29% were in geriatric nursing home.

Discussion.– The analysis of this cohort confirms the data of the literature: the etiology of the trauma is mainly a fall in elderly subjects, the lesions are more often incomplete and the evolution is mainly favorable. 66.66% of the patients underwent surgery, this fact may explain the favorable outcome of our cohort, but this point is still debated in the literature.

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Evaluation of the long-term results of functional surgery of the upper limbs in tetraplegic individuals

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Keyword: Surgical rehabilitation of the tetraplegic upper limb

Introduction.– Tetraplegic patients who receive a program of upper limb functional surgery followed by appropriate rehabilitation improve their prehensile capacities, and activities of daily living. But very few studies have evaluated the long-term results.

Goal.– To evaluate the outcomes of rehabilitative surgery of the upper limbs after a minimum of five years.

Method.– All tetraplegic patients having undergone rehabilitative surgery of the upper limbs more than five years ago at our centre were called in for re-evaluation.

Evaluation focuses on:

– standard analytic measurements of the upper limb: range of motion, muscle strength (BMRC), and sensory evaluation;
– assessment of different types of prehension;
– functional independence;
– patient's satisfaction: VAS, and a satisfaction questionnaire.

Results.– 68 patients underwent surgery, 9 deceased, 11 live abroad, 12 lost to follow-up, 36 responded and 25 agreed to participate (70% of those who responded), that were evaluated by two different methods. In the group of 13 patients "reviewed" the majority of patients improved analytical and functional remains at a distance with a great satisfaction. There are two cases of secondary syringomyelia occurred in which the benefit is more limited in the long term. outcomes are worse in 5 patients but the degree of satisfaction remains high on average. We find again a case of syringomyelia.

Discussion and conclusion.– Initial results show that patients who are stable in terms neurological keep the long term performance of gripping and functional independence equivalent to those obtained early. Patients are very satisfied with the long-term outcome and would recommend this surgery in a similar case. In three cases of syringomyelia results were not maintained, which demonstrates the need to track this complication.

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Kinematic patterns of modified grasp (tenodesis) in C6 quadriplegic patients

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Keywords: Tenodesis; C6 tetraplégia; Kinematic

C6 quadriplegic patients can achieve functional grasp using tenodesis effect. Grasping kinematics of modified prehension after tetraplegia have been poorly reported in the literature. This study investigated the kinematic parameters in pointing and tenodesis grasping in these patients.

Four complete C6 quadriplegic patients and four healthy subjects were included. Each subject performed three different tasks: i) pointing to two targets with the forefinger, ii) reaching for and grasping a 7 cm diameter apple; iii) reaching for and grasping a vertical floppy disk.

Movements were recorded with an optoelectronic system at a sampling rate of 50 Hz. The kinematic parameters computed were: Movement Time (MT), Peak Velocity (PV), wrist extension and pointing accuracy.

In both pointing and grasping tasks, patients showed a longer MT associated with a weaker PV compared to control subjects. Pointing errors were slightly more pronounced in the sagittal plan. In the grasping tasks, the main difference was observed for the wrist angle. During the transport phase, quadriplegic patients presented a more pronounced wrist flexion compared to control subjects. During the gasping phase, tetraplegic patients achieved a more important wrist extension known as "tenodesis effect".

Active wrist extension in quadriplegic subjects occurs later after the onset of movement, unlike the early opening of the hand in control subjects, indicating that this grasp using tenodesis reflect an intentional compensatory mechanism.

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Compared duration of hospital stays according to the age of traumatic SCI patients hospitalized for the surgical treatment of a pelvic pressure sore by myocutaneous flap at the University Hospital of Nantes

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Keywords: Spinal cord injury; Pressure sore; Aging

Aim.– To compare the duration of hospital stays after surgery for pelvic pressure sore by myocutaneous flap between two groups of traumatic spinal cord injured patients according to the age.

Patients and methods.– Inclusions between 1st January 2006 and 31st December 2010 among traumatic SCI patients hospitalized in the department of neurological PM&R at the University Hospital of Nantes. Retrospective study based on the duration of stay in hospital after surgery, since the healing period and the first sitting time both follow the same standard protocol for any patient of any age. Patients divided into two groups: A = 18–64 years old and B = ≥ 65 years old according to the WHO classification for aging people. Two separated periods: Period one = from surgery until complete healing, and Period two = from first sitting time until final discharge from hospital. The average durations of complete hospital stays and for Period 1 and Period 2 are compared between the 2 groups by a Student *t* test.
Results.– The average hospital stay was 156.2 days for group A ($n = 54$) and 178.4 days for group B ($n = 7$), therefore no significant difference between the two groups (P = 0.49). Removing five cases from group A, hospitalized during more than one year (no case in group B), this difference became significant (P = 0.02). Comparing the 2 periods of hospital stays, Period 2 proved to be more different between the two groups: 54 days for group A versus 83 days for group B, P = 0.24; P = 0.82 for Period 1.
Discussion.– Pelvic pressure sores are common complications in traumatic SCI patients and one of the main reasons for rehospitalization. These complications are responsible for long hospital durations and are likely to cause overcomplications (haemorrhagic, respiratory, thromboembolic) within a population growing older thanks to better medical follow-up.
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Tuberculous spinal cord compression: 19 women

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Keywords: Tuberculosis; Spinal cord compression

Introduction.– In 2009, the incidence of extrapulmonary tuberculosis in Algeria was at 32.4 cases/100,000 persons, of whom 4.4% had bone and joint tuberculosis. Spinal tuberculosis is the most frequent localization, 16% complicated by spinal cord compression.
Objectives.– To determine the current characteristics of 19 women managed for tuberculous spinal cord compression at the physical medicine and rehabilitation department of Ben-Aknoun hospital Algiers, Algeria.
Methods.– Retrospective chart review about 19 women admitted for tuberculous spinal cord compression to our department, between January 2001 and December 2010.
Results.– Female population, mean age = 47.78 years. None of the patients were immunodeficient.
The median duration of symptoms before diagnosis = 6.61 months.
The diagnosis of tuberculosis was of:
– certain = 57.89%;
– strong presumption = 42.11%.
The medical imaging (6 CT-scan and 13 MRI) confirmed the medullar compression, involving the cervico-thoracic spine = 10.52%, thoracic spine = 57.89%, lumbar spine = 31.58%.
All the patients had an antituberculous chemotherapy associated in 52.63% of the cases with a surgical management.
In 73, 68% cases other tuberculous foci were found (meningo-encephalitic = 6 cases, pulmonary = 6 cases, abdominal = 6 cases).
The median duration of the disease before PMR management = 10.1 month, the median duration of hospitalization = 62.4 days.
Clinical features at admission: paraparesia = 18 cases, paraplegia = 1 case.
Outcomes.– 63.16% regained the ability to ambulate and 36.87% ($n = 7$) used wheelchairs (5 patients/7 had a meningoencephalitic localization associated). 21% had a deleterious spasticity, and 53% had neuropathic pain.
Conclusion.– In our charts, we found: several tuberculosis foci, and when a neuro-meningeal localization was associated to the spinal cord compression the functional prognosis was poor. The quality of life was altered by the spasticity and the residual pain.

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Ateliers

Version française

Prise en charge des tétraplégiques dépendants d'une ventilation mécanique en unité de MPR

Résumé non communiqué.

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Techniques instrumentales de désencombrement

Résumé non communiqué.

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Version anglaise

Care for tetraplegic patients needing mechanical ventilation in a PRM department

No abstract provided.

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Devices for secretion removal

No abstract provided.

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Posters

Version française

P002–FR

Caractères épidémiologiques des paraostéoarthrapathies neurogénes chez les blessés médullaires au Maroc

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Mots clés : Lésion médullaire ; Paraostéoarthropathies neurogénes

Introduction.– Les paraostéoarthrapathies neurogénes sont des affections fréquentes chez les blessés médullaires.
Objectif.– Décrire les caractères épidémiologiques, cliniques, le retentissement fonctionnel et les difficultés thérapeutiques des paraostéoarthrapathies neurogénes dans un groupe de patients blessés médullaires marocains.
Patients et méthodes.– Étude descriptive et rétrospective portant sur 30 patients lésés médullaires suivis pour rééducation fonctionnelle au centre national de